



Backing Up Oracle Databases with Handy Backup

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Introduction

One of the most popular features of Handy Backup software (business editions) is the backing up of Oracle databases. "Hot" backup technology enables to backup database even if it is in active use. Backups of the Oracle database can be created using any version of Handy Backup if it contains *the Oracle plug-in*¹. The plug-in helps to make the process of backing up and restoring fully automated and fast. The software provides an opportunity to create and restore backups on a schedule. Moreover, Handy Backup is able to run as a Windows service and doesn't affect system performance.

This guide provides detailed instructions for creating and restoring backups of Oracle. It will effectively protect the data stored in your database.

Main features of Handy Backup Oracle plug-in

Assignment

- "Hot" Oracle database backup;
- "Cold" backup in case of inability to perform "hot" backup;
- Restoring database from a backup.

Advantages

1. The ability to back up without interrupting a database (a "hot" backup).
2. The use of the reliable RMAN utility for backups ensures the integrity of stored data.

Backing up of remote Oracle databases

To back up an Oracle database on a remote computer you should install the client Handy Backup (**Backup Network Workstation**). Detailed instructions for use of Handy Backup for backup of remote Oracle databases is beyond the scope of this manual. If you want to get that instructions you can send request on sales@handybackup.net.

Data that could be included in a backup

- All database tables;
- Archive logs before and after backup;
- **Spfile**;

¹Oracle plug-in is included in Small Server and Network Server editions and could be added to Home Standard and Home Professional versions as a complementary feature.

- **controlfile;**
- Settings and preferences: **tnsnames.ora**, **listener.ora**, **sqlnet.ora** on the way
%ORACLE_HOME%\network\admin;
- File of passwords **%ORACLE_HOME%\database\pwd<SID>.ora**.

Supported versions of Oracle

The plug-in was developed for version **Oracle 10g**. To back up older versions of Oracle you are recommended to use alternative methods of backup. Please feel free to write on support@handybackup.net for advice on selection and use of alternatives.

Handy Backup officially supports **Oracle 10g** version on any platform of Windows NT family.

Access rights

The user account under which the program runs must have membership of the **ORA_DBA** group. Instruction for adding users for **ORA_DBA** group are on the appendix for this manual.

Compression of backups

The RMAN (**Recovery Manager**) utility was introduced in Oracle since version 8 and is used for backing up and recovery procedures. All data is stored by means of RMAN by default, it allows to reduce significantly the size of backups.

Backup and Restore

Preparation of database for backup

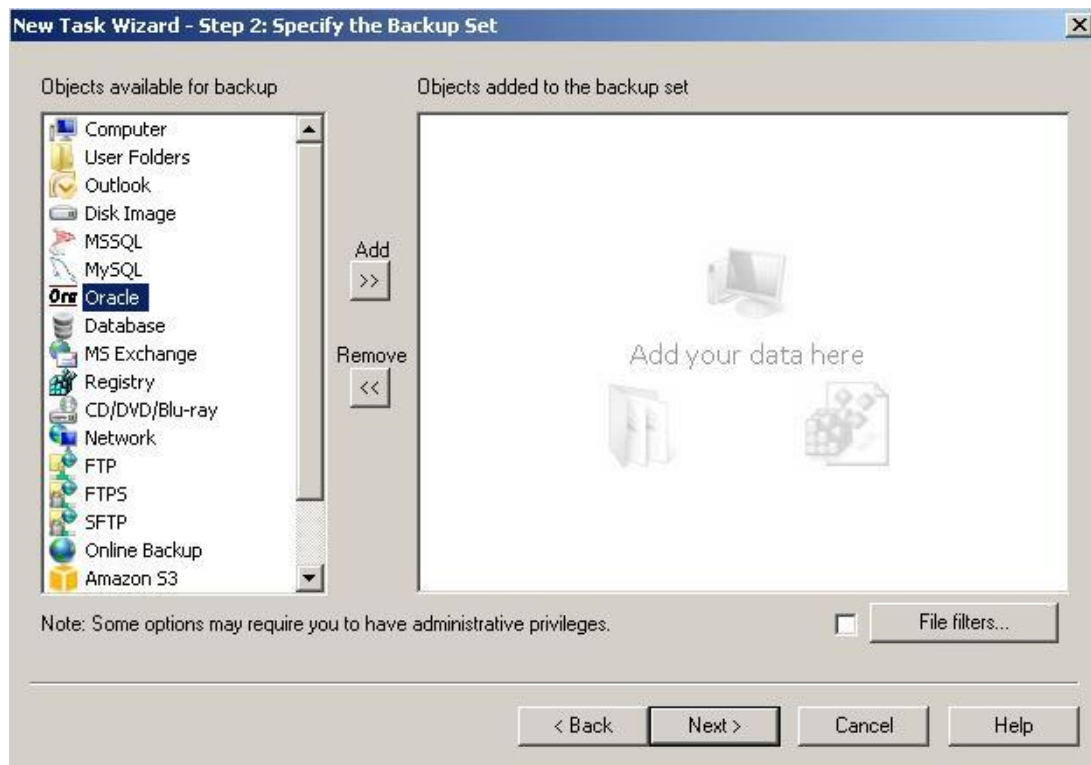
To use the opportunity of "hot" backup your database should run in **ARCHIVELOG** mode. If the database operates in **NOARCHIVELOG**, then its work will be stopped during backup and then restored at the end of the backup. To find out the current mode of the database fulfill the following query:

SQL> select log_mode from sys.v\$database

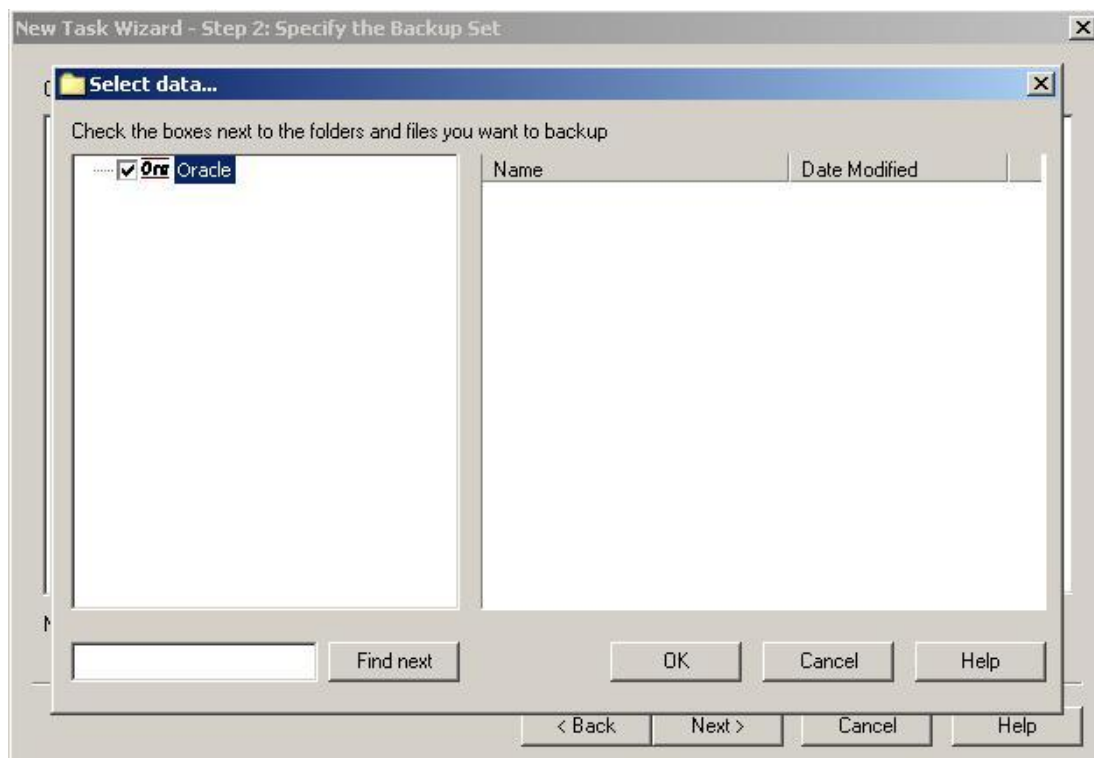
For successful connection of Handy Backup plug-in for the database the following requirement should be met: **Novosoft Network Workstation** service should run as the user of the group of **ORA_DBA**.

Creating a Backup Task

Choose Oracle plug-in from the menu:

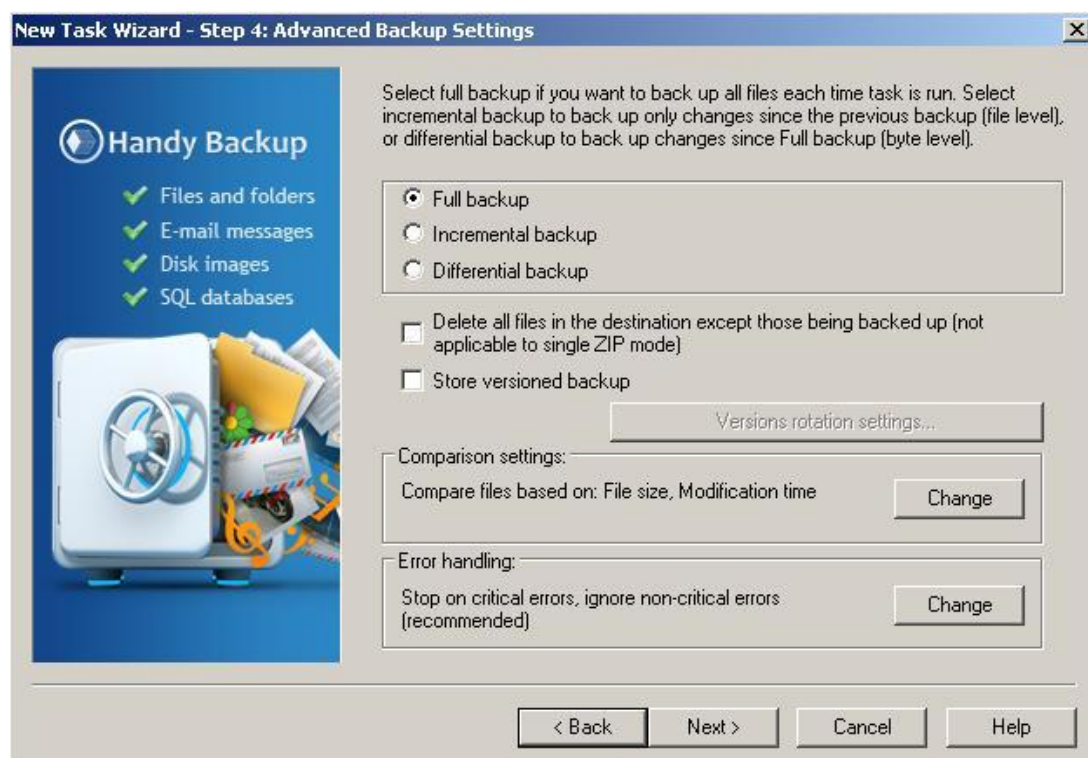
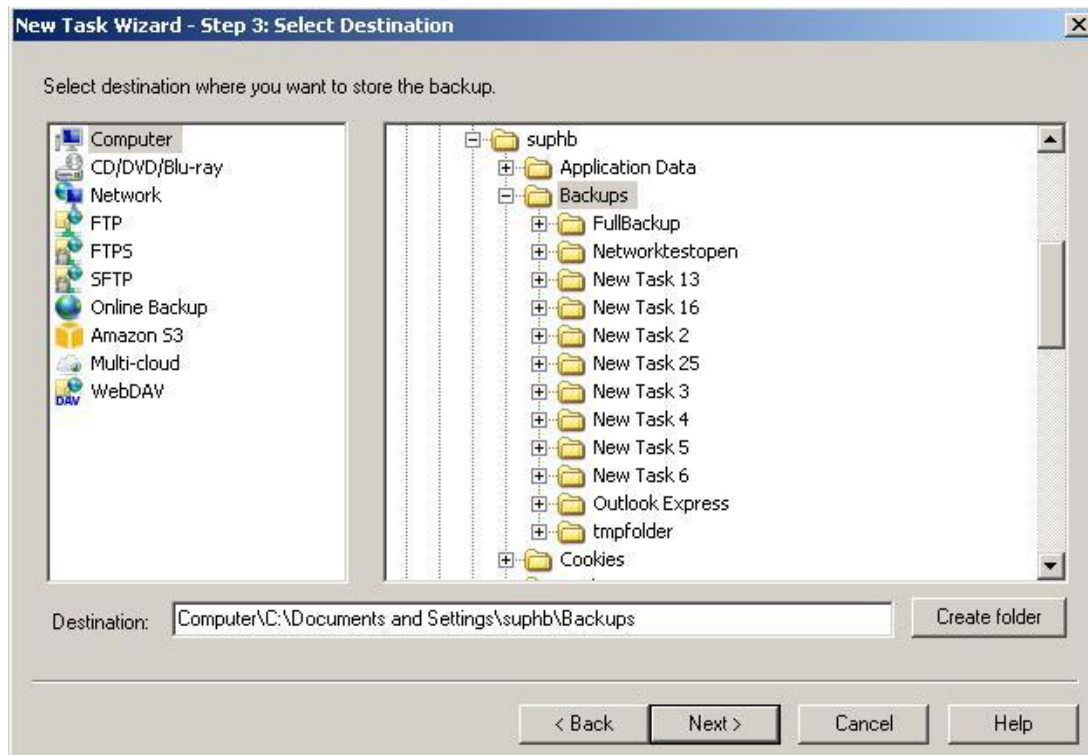


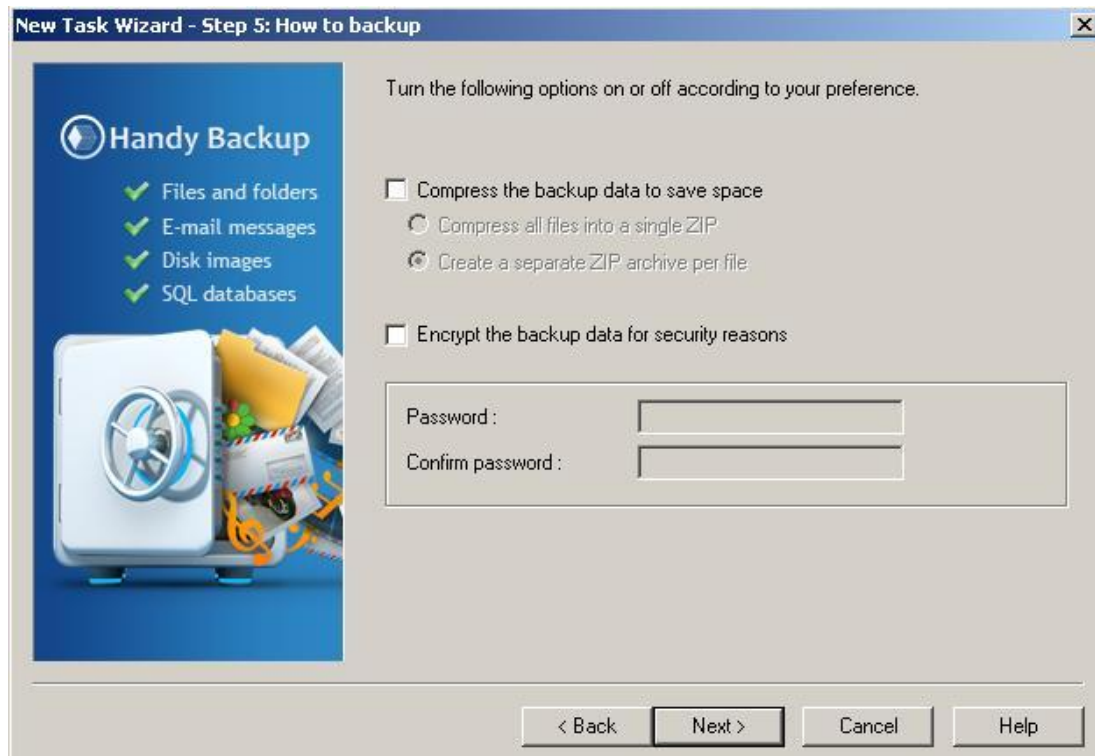
Select required databases:



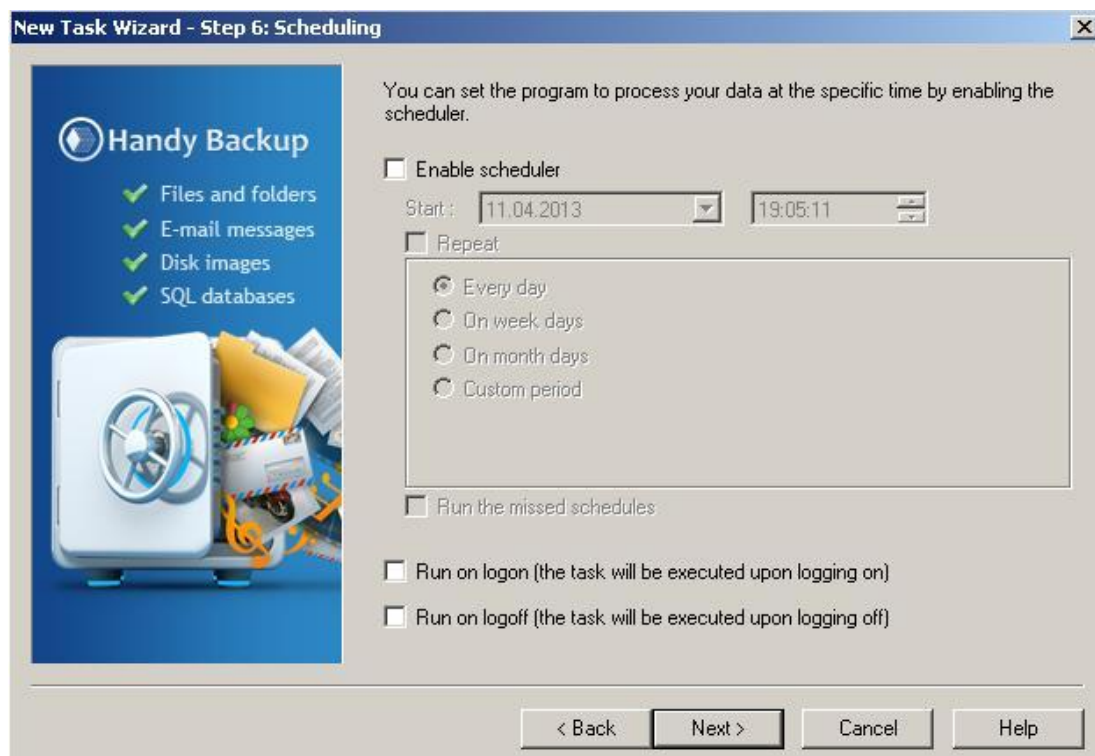
In the drop-down list you can see Oracle databases installed on the local machine (displays their name **ORACLE_HOME**) and the bases it serves (displayed **SID** database). Select the database that you want to copy.

Following steps:





Oracle backup is carried out with data compression by default so there is no need for additional compression by Handy Backup.



New Task Wizard - Step 7: Pre-, Post-Operation Actions

☐ Run a program before running the task
☐ Wait for the program before proceeding

☐ Run a program after running the task
☐ Wait for the program before finishing

To enable the following options, you need to set up the e-mail notification settings on the 'E-mail Notification' page of the 'Settings' dialog box.

☐ Send an e-mail notification:
☒ When the operation finishes
☐ When the operation finishes with an error

New Task Wizard - Step 8: Ready To Create New Task

You have set all properties of the new task. Press the 'Finish' button to create the task or the 'Back' button to change properties.

Please type a name for this backup task:

New Task 6

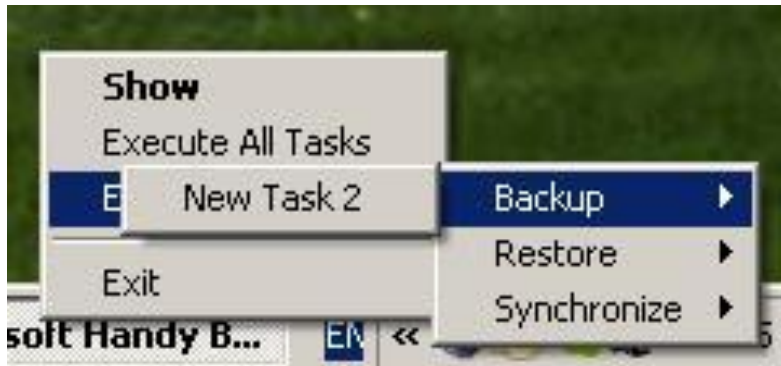
Task properties:

- Type: Backup
- Source (folders and files): pc0025.novosoft.novosoft.ru\Computer\C:
- Backup location: pc0025.novosoft.novosoft.ru\Computer\C:\Documents and Settings\suph
- type: Full
- Delete extra files: No

☒ Execute this task immediately

Performing a Backup Task

Select **Backup** from the context menu of tasks.



Wait until the end of the task.

Please note that you can create a task list and make backups automatically (for more information on this feature please read the manual for Handy Backup or write on support@handybackup.net).

Restore

If you want to restore Oracle database to the same location where it took place just select **Restore** from the context menu of tasks.



If the database was lost completely, follow these steps:

1. Create a new database with the same **BASE_NAME** and **SID** as before. For instance, this can be done with the help of **Database Configuration Assistant**. Make sure that the path to the folder where the files are stored is the same as before.
2. Stop the database instance and delete all data files and the **controlfile** of the newly created database.
3. Re-run the database instance.

4. Perform common restoration of the backup.
5. Wait until the end of the process.

If the automatic recovery fails for some reason, it is recommended to try to restore the database manually using files of Handy Backup. In this situation, please apply for professional help writing on support@handybackup.net.

Note:

Sometimes during the restore the database transaction logs are used and after recovery the database remains in the same state as before.

In order to prevent this, you should:

- 1) Remove only the transaction logs (in the folder **Flash Recovery Area**).
- 2) If paragraph 1 does not help, remove the logs and data file **USER.dbf**.

Before deleting the files you need to stop the Oracle instance service and to restart it before restoring.

Technical details

Name format of your files

%d-%l-%T-%U.bcp – data files,
%h-%e-%d-%l-%T-%U.archlog – archived log files,
%d-%l-%T-%U.spfile – SPFILE
%d-%l-%T-%U.controlfile - controlfile
%d - base name,
%l - DBID,
%T - date in YYYYMMDD format,
%U - unique string,
%e - Specifies the archived log sequence number,
%h - Specifies the archived redo log thread number.

Following files are also included:

tnsnames.ora,
listener.ora,
sqlnet.ora,
pwd<SID>.ora

Search of Oracle databases

All information about **Oracle Homes** is taken from the registry keys like:

HKEY_LOCAL_MACHINE\SOFTWARE\ORACLE\KEY_<ORACLE_HOME_NAME>

Information about instance identifiers (**SID** in Oracle terms) is taken from the keys like:

HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\OracleService<SID>,
where <SID> is an instance identifier.

Thus hierarchy tree is formed: **oracle_home\oracle_sid**

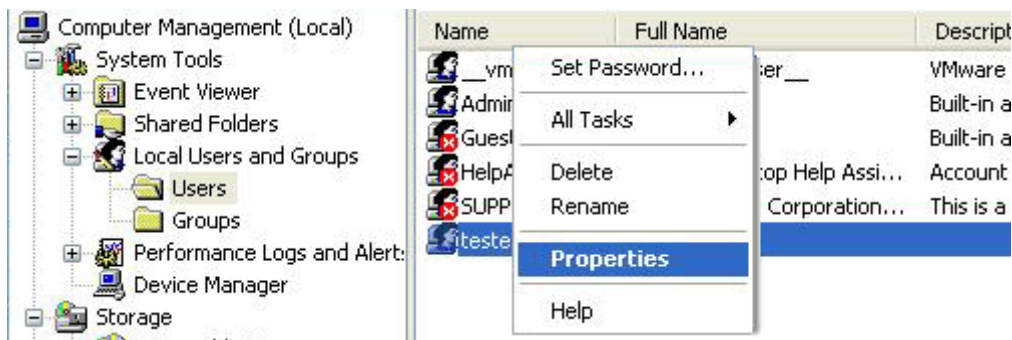
Appendix. Adding Users to the ORA_DBA Group

To add a user to the **ORA_DBA** group, follow these steps:

1. Make sure that you have Oracle installed on your PC.
2. On the **Windows Start** menu, right click **Computer** and then click **Manage**.

The **Computer Management** dialog opens.

3. In the left pane, expand **System Tools**, then expand **Local Users and Groups**, and then click **Users**.
4. In the right pane, right-click the desired user account, and then click **Properties**. The **User Properties** dialog opens.



5. Under the **Member Of** tab, click **Add**.
6. In the bottom pane select **ORA_DBA** and then click **OK**.

Conclusion

Oracle backup tool of Handy Backup is a convenient solution for backing up and restoring data of Oracle databases. Opportunity to use the program without stopping the database allows applying this method of backup for data protection in the various IT-infrastructures.

About Handy Backup

Handy Backup is a product line for backup created by Novosoft. The software allows backing up, restoring and synchronizing of different types of data. Wide functionality have allowed Handy Backup to gain popularity on the global market of IT products as a convenient solution for home usage and corporate environment.

About Novosoft

The company was founded in 1992 and provides a wide range of services for various industries in the field of IT. Solutions developed by the company's specialists are based on the advanced technologies that allow the Novosoft's products to maintain leading positions on the domestic and international markets.

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